

**TABLE A5.601 NONRESIDENTIAL BUILDINGS:
Green Building Standards Code Proposed Performance Approach**

Note: This table is intended only as an aid in illustrating the nonresidential tier structure

CATEGORY	ENVIRONMENTAL PERFORMANCE GOAL	TIER 1	TIER 2
All	Minimum Mandatory	Meet all of the provisions of Chapter 5	Meet all of the provisions of Chapter 5
Planning and Design	Designated Parking for Fuel Efficient Vehicles	Approx. 10% of total spaces	Approx. 12% of total spaces
	Electric Vehicle Charging	Approx. 8% of total spaces	Approx. 10% of total spaces
	Cool Roof to Reduce Heat Island Effect	Roof Slope < 2:12 SRI 75 Roof Slope > 2:12 SRI 16	Roof Slope < 2:12 SRI 82 Roof Slope > 2:12 SRI 27
		1 additional Elective from Division A5.1	3 additional Electives from Division A5.1
Energy Efficiency	Energy Performance ^{2a, 2b}	Outdoor lighting power 90% of Part 6 allowance	Outdoor lighting power 90% of Part 6 allowance
		If applicable, solar water-heating system with minimum solar savings fraction of 0.15	If applicable, solar water-heating system with minimum solar savings fraction of 0.15
		If applicable, certain functional areas comply with residential indoor lighting requirements	If applicable, certain functional areas comply with residential indoor lighting requirements
		Energy Budget 95% or 90% of Part 6 calculated value of allowance	Energy Budget 90% or 85% of Part 6 calculated value of allowance
Water Efficiency and Conservation	Indoor Water Use	12% Savings	20% Savings
		1 additional Elective from Division A5.3	3 additional Electives from Division A5.3
Material Conservation and Resource Efficiency ³	Construction Waste Reduction	At least 65% reduction	At least 80% reduction
	Recycled Content	Utilize recycled content materials for 10% of total material cost	Utilize recycled content materials for 15% of total material cost
		1 additional Elective from Division A5.4	3 additional Electives from Division A5.4
Environmental Quality	Low-VOC Resilient Flooring	90% of flooring meets VOC limits	100% of flooring meets VOC limits ¹
	Low-VOC Thermal Insulation	Comply with VOC limits	Install no-added formaldehyde insulation and comply with VOC limits
		1 additional Elective from Division A5.5	3 additional Electives from Division A5.5
Additional Measures	Added measures shall be achieved across at least 3 categories	1 additional Elective	3 additional Electives
Approximate Total Measures		15	25

1. Exception: Allowance may be permitted in Tier 2 for up to 5-percent specialty purpose flooring.

2. Solar water-heating system requirement for newly constructed restaurants as per A5.203.1.1.2.

Exceptions:

a. Buildings with a natural gas service water heater with a minimum of 95-percent thermal efficiency.

b. Buildings where greater than 75 percent of the total roof area has annual solar access that is less than 70 percent. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

3. Life cycle assessment compliant with Section A5.409.4 in this code may be substituted for prescriptive measures from Division A5.4.

NONRESIDENTIAL VOLUNTARY MEASURES

SECTION A5.602 NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLISTS⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Requirements			
Project meets all of the requirements of Divisions 5.1 through 5.5.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning and Design			
Site Selection			
A5.103.1 Community connectivity. Locate project on a previously developed site within a 1/2-mile radius of at least ten basic services, listed in Section A5.103.1.		<input type="checkbox"/>	<input type="checkbox"/>
A5.103.2 Brownfield or greyfield site redevelopment or infill area development. Select for development a brownfield in accordance with Section A5.103.2.1 or on a greyfield or infill site as defined in Section A5.106.3.2.		<input type="checkbox"/>	<input type="checkbox"/>
A5.103.2.1 Brownfield redevelopment. Develop a site documented as contaminated and fully remediated or on a site defined as a brownfield.			
Site Preservation			
A5.104.1.1 Local zoning requirement in place. Exceed the zoning's open space requirement for vegetated open space on the site by 25 percent.		<input type="checkbox"/>	<input type="checkbox"/>
A5.104.1.2 No local zoning requirement in place. Provide vegetated open space area adjacent to the building equal to the building footprint area.		<input type="checkbox"/>	<input type="checkbox"/>
A5.104.1.3 No open space required in zoning ordinance. Provide vegetated open space equal to 20 percent of the total project site area.		<input type="checkbox"/>	<input type="checkbox"/>
Deconstruction and Reuse of Existing Structures			
A5.105.1.1 Existing building structure. Maintain at least 75 percent of existing building structure (including structural floor and roof decking) and envelope (exterior skin and framing) based on surface area.		<input type="checkbox"/>	<input type="checkbox"/>
Exceptions: 1. Window assemblies and nonstructural roofing material. 2. Hazardous materials that are remediated as a part of the project. 3. A project with an addition of more than two times the square footage of the existing building.			
A5.105.1.2 Existing nonstructural elements. Reuse existing interior nonstructural elements (interior walls, doors, floor coverings and ceiling systems) in at least 50 percent of the area of the completed building (including additions).		<input type="checkbox"/>	<input type="checkbox"/>
Exception: A project with an addition of more than two times the square footage of the existing building.			
A5.105.1.3 Salvage. Salvage additional items in good condition such as light fixtures, plumbing fixtures and doors for reuse on this project in an onsite storage area or for salvage in dedicated collection bins. Document the weight or number of the items salvaged. See Items 1 and 2.		<input type="checkbox"/>	<input type="checkbox"/>
Site Development			
5.106.1 Storm water pollution prevention. Newly constructed projects and additions which disturb less than one acre of land shall prevent the pollution of stormwater runoff from the construction activities through local ordinance in Section 5.106.1.1 or Best management practices (BMP) in Section 5.106.1.2.	<input checked="" type="checkbox"/> or <input checked="" type="checkbox"/>		
A5.106.2 Storm water design. Design storm water runoff rate and quantity in conformance with Section A5.106.2.1 and storm water runoff quality by Section A5.106.2.2 or by local requirements, whichever are stricter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.106.2.1 Storm water runoff rate and quantity. Implement a storm water management plan resulting in no net increase in rate and quantity of storm water runoff from existing to developed conditions. Exception: If the site is already greater than 50 percent impervious, implement a storm water management plan resulting in a 25-percent decrease in rate and quantity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.106.2.2 Storm water runoff quality. Use post construction treatment control best management practices (BMPs) to mitigate (infiltrate, filter or treat) storm water runoff from the 85th percentile 24-hour runoff event (for volume-based BMPs) or the runoff produced by a rain event equal to two times the 85th percentile hourly intensity (for flow-based BMPs).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.106.3 Low impact development (LID). Reduce peak runoff in compliance with Section 5.106.1. Employ at least two of the following methods or other best management practices to allow rainwater to soak into the ground, evaporate into the air or collect in storage receptacles for irrigation or other beneficial uses. LID strategies include, but are not limited to those listed in Section A5.106.3.		<input type="checkbox"/>	<input type="checkbox"/>
A5.106.3.1 Implementation. If applicable, coordinate LID projects with the local Regional Water Quality Control Board, which may issue a permit or otherwise require LID.		<input type="checkbox"/>	<input type="checkbox"/>
A5.106.3.2 Greyfield or infill site. Manage 40 percent of the average annual rainfall on the site's impervious surfaces through infiltration, reuse or evapotranspiration.		<input type="checkbox"/>	<input type="checkbox"/>

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continued

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
A5.106.7 Exterior walls. Meet requirements in the current edition of the <i>California Energy Code</i> and comply with either Section A5.106.7.1 or A5.106.7.2 for wall surfaces: A5.106.7.1 Fenestration. Provide vegetative or man-made shading devices for all fenestration on east-, south- and west-facing walls. A5.106.7.1.1 East and west walls. Shading devices shall have 30% coverage to a height of 20 feet or to the top of the exterior wall, whichever is less. A5.106.7.1.2 South walls. Shading devices shall have 60% coverage to a height of 20 feet or to the top of the exterior wall, whichever is less. A5.106.7.2 Opaque wall areas. Use wall surfacing with SRI 25 (aged), for 75% of opaque wall areas. See Exception and Note.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5.106.8 Light pollution reduction. [N] Outdoor lighting systems shall be designed and installed to comply with the following: 1. The minimum requirements in the <i>California Energy Code</i> for Lighting Zones 1–4 as defined in Chapter 10 of the <i>California Administrative Code</i> ; and 2. Backlight, Uplight and Glare (BUG) ratings as defined in IESNA TM-15-11; and 3. Allowable BUG ratings not exceeding those shown in Table 5.106.8, or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent. Exceptions: [N] 1. Luminaires that qualify as exceptions in Section 140.7 of the <i>California Energy Code</i> 2. Emergency lighting 3. Building facade meeting the requirements in Table 140.7-B of the <i>California Energy Code</i> , Part 6. 4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction Note: [N] See also <i>California Building Code</i> , Chapter 12, Section 1205.6 for college campus lighting requirements for parking facilities and walkways.	<input checked="" type="checkbox"/> or <input checked="" type="checkbox"/>		
5.106.10 Grading and paving. Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include those shown in Items 1–5. See exception for additions or alterations.	<input checked="" type="checkbox"/>		
A5.106.11 Heat island effect. Reduce nonroof heat islands and roof heat islands as follows: A5.106.11.1 Hardscape alternatives. Use one or a combination of strategies 1 through 2 for 50 percent of site hardscape or put 50 percent of parking underground. 1. Use light colored materials with an initial solar reflectance value of at least 30 as determined in accordance with ASTM Standards E1918 or C1549. 2. Use open-grid pavement system or pervious or permeable pavement system. A5.106.11.2 Cool roof for reduction of heat island effect. Use roofing materials having a minimum aged solar reflectance, thermal emittance complying with Sections A5.106.11.2.2 and A5.106.11.2.3 or a minimum aged or Solar Reflectance Index (SRI) equal to or greater than the values shown in: Table A5.106.11.2.2 – Tier 1 or Table A5.106.11.2.3 – Tier 2 Exceptions: 1. Roof constructions that have a thermal mass over the roof membrane, including areas of vegetated (green) roofs, weighing at least 25 lb/sf. 2. Roof area covered by building integrated solar photovoltaic and building integrated solar thermal panels. A5.106.11.2.1 Solar reflectance. Roofing materials shall have a minimum aged solar reflectance equal to or greater than the values specified in Table A5.106.11.2.2 for Tier 1 and Table A5.106.11.2.3 for Tier 2. If Cool Roof Rating Council (CRRC) testing for aged reflectance is not available for any roofing products, the aged value shall be determined using the CRRC certified initial value using the equation $p_{aged} = [0.2 + \beta (p_{initial} - 0.2)]$, where $p_{initial}$ = the initial solar reflectance and soiling resistance, β , listed by product type in Table A5.106.11.2.1. Solar reflectance may also be certified by other supervisory entities approved by the Energy Commission pursuant to Title 24, Part 1, California Administrative Code. A5.106.11.2.2 Thermal emittance. Roofing materials shall have a CRRC initial or aged thermal emittance as determined in accordance with ASTM E 408 or C 1371 equal to or greater than those specified in Table A5.106.11.2.2 for Tier 1 and Table A5.106.11.2.3 for Tier 2. Thermal emittance may also be certified by other supervisory entities approved by the Energy Commission pursuant to Title 24, Part 1, California Administrative Code. A5.106.11.2.3 Solar reflectance index alternative. Solar Reflectance Index (SRI) equal to or greater than the values specified in Table A5.106.11.2.2 for Tier 1 and Table A5.106.11.2.3 for Tier 2 may be used as an alternative to compliance with the aged solar reflectance values and thermal emittance. SRI values used to comply with this section shall be calculated using the Solar Reflectance Index (SRI) Calculation Worksheet (SRI-WS) developed by the California Energy Commission or in compliance with ASTM E 1980-01 as specified in the California Energy Code, Section 118(i)3. Solar reflectance values used in the SRI-WS shall be based on the aged reflectance value of the roofing product or the equation in section A5.106.11.2.1 if the CRRC certified aged solar reflectance are not available. Certified Thermal emittance used in the SRI-WS may be either the initial value or the aged value listed by the CRRC. Solar reflectance and thermal emittance may also be certified by other supervisory entities approved by the Commission pursuant to Title 24, Part 1, California Administrative Code. See Note: A5.106.11.3 Verification of compliance. If no documentation is available, an inspection shall be conducted to ensure roofing materials meet cool roof aged solar reflectance and thermal emittance or SRI values.	 		

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Energy Efficiency			
Performance Requirements for Newly Constructed Buildings and Additions			
5.201.1 Scope. Building meets or exceeds the requirements of the California Building Energy Efficiency Standards. ³	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1 Energy efficiency. Nonresidential, high-rise residential and hotel/motel buildings that include lighting and/or mechanical systems shall comply with Sections A5.203.1.1 and either A5.203.1.2.1 or A5.203.1.2.2. Newly constructed buildings, as well as additions and alterations, are included in the scope of these sections. Buildings permitted without lighting or mechanical systems shall comply with Section A5.203.1.1 but are not required to comply with Sections A5.203.1.1.2 or A5.203.1.2.		<input type="checkbox"/>	<input type="checkbox"/>
A5.203.1.1 Tier 1 and Tier 2 prerequisites. Each of the following efficiency measures is required for all applicable components of the building project		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.1.1 Outdoor lighting. Newly installed outdoor lighting power is no greater than 90 percent of the Title 24, Part 6 calculated value of allowed outdoor lighting power.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.1.2 Service water heating in restaurants. Newly constructed restaurants 8,000 square feet or greater and with service water heaters rated 75,000 Btu/h or greater installed a solar water-heating system with a minimum solar savings fraction of 0.15. See exceptions 1 and 2.		<input checked="" type="checkbox"/> ²	<input checked="" type="checkbox"/> ²
A5.203.1.2 Performance standard. Comply with one of the advanced efficiency levels indicated below. A5.203.1.2.1 Tier 1. Buildings complying with the first level of advanced energy efficiency shall have an Energy Budget that is no greater than indicated below, depending on the type of energy systems included in the building project. If the newly constructed building, addition or alteration does not include indoor lighting or mechanical systems, then no additional performance requirements above Title 24, Part 6 are required. 1. For building projects that include indoor lighting or mechanical systems, but not both: No greater than 95 percent of the Title 24, Part 6, Energy Budget for the Standard Design Building as calculated by compliance software certified by the Energy Commission. 2. For building projects that include indoor lighting and mechanical systems: No greater than 90 percent of the Title 24, Part 6 Energy Budget for the Standard Design Building as calculated by compliance software certified by the Energy Commission.		<input checked="" type="checkbox"/> ²	
A5.203.1.2.2 Tier 2. Buildings complying with the second level of advanced energy efficiency shall have an Energy Budget that is no greater than indicated below, depending on the type of energy systems included in the building project. If the newly constructed building, addition or alteration does not include indoor lighting or mechanical systems, then no additional performance requirements above Title 24, Part 6 are required. 1. For building projects that include indoor lighting or mechanical systems, but not both: No greater than 90 percent of the Title 24, Part 6, Energy Budget for the Standard Design Building as calculated by compliance software certified by the Energy Commission. 2. For building projects that include indoor lighting and mechanical systems: No greater than 85 percent of the Title 24, Part 6, Energy Budget for the Standard Design Building as calculated by compliance software certified by the Energy Commission. Note: For Energy Budget calculations, high-rise residential and hotel/motel buildings are considered nonresidential buildings.			<input checked="" type="checkbox"/> ²
Renewable Energy			
A5.211.1 On-site renewable energy. Use on-site renewable energy for at least 1 percent of the electrical service overcurrent protection device rating calculated in accordance with the 2016 <i>California Electrical Code</i> or 1KW, whichever is greater, in addition to the electrical demand required to meet 1 percent of natural gas and propane use calculated in accordance with the 2016 <i>California Plumbing Code</i> . A5.211.1.1 Documentation. Calculate renewable on-site system to meet the requirements of Section A5.211.1. Factor in net-metering, if offered by local utility, on an annual basis.		<input type="checkbox"/>	<input type="checkbox"/>
A5.211.3 Green power. Participate in the local utility's renewable energy portfolio program that provides a minimum of 50-percent electrical power from renewable sources. Maintain documentation through utility billings.		<input type="checkbox"/>	<input type="checkbox"/>

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Elevators, Escalators and Other Equipment			
A5.212.1 Elevators and escalators. In buildings with more than one elevator or two escalators, provide systems and controls to reduce the energy demand of elevators and escalators as follows. Document systems operation and controls in the project specifications and commissioning plan.			
A5.212.1.1 Elevators. Traction elevators shall have a regenerative drive system that feeds electrical power back into the building grid when the elevator is in motion.			
A5.212.1.1.1 Car lights and fan. A parked elevator shall turn off its car lights and fan automatically until the elevator is called for use.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.2 Escalators. An escalator shall have a variable voltage variable frequency (VVVF) motor drive system that is fully regenerative when the escalator is in motion.		<input type="checkbox"/>	<input type="checkbox"/>
A5.212.1.4 Controls. Controls that reduce energy demand shall meet requirements of CCR, Title 8, Chapter 4, Subchapter 6 and shall not interrupt emergency operations for elevators required in CCR, Title 24, Part 2, <i>California Building Code</i> .		<input type="checkbox"/>	<input type="checkbox"/>
Energy Efficient Steel Framing			
A5.213.1 Steel framing. Design for and employ techniques to avoid thermal bridging.		<input type="checkbox"/>	<input type="checkbox"/>
Water Efficiency and Conservation			
Indoor Water Use			
5.303.1 Meters. Separate meters shall be installed for the uses described in Sections 5.303.1.1 and 5.303.1.2.			
5.303.1.1 New buildings or additions in excess of 50,000 square feet. Separate submeters shall be installed as follows:	<input checked="" type="checkbox"/>		
1. For each individual leased, rented or other tenant space within the building projected to consume more than 100 gal/day, including, but not limited to, spaces used for laundry or cleaners, restaurant or food service, medical or dental office, laboratory, or beauty salon or barber shop.			
2. Where separate submeters for individual building tenants are unfeasible, for water supplied to the following subsystems:			
a. Makeup water for cooling towers where flow through is greater than 500 gpm (30 L/s)	<input checked="" type="checkbox"/>		
b. Makeup water for evaporative coolers greater than 6 gpm (0.04 L/s)	<input checked="" type="checkbox"/>		
c. Steam and hot-water boilers with energy input more than 500,000 Btu/h (147 kW)	<input checked="" type="checkbox"/>		
5.303.1.2 Excess consumption. A separate submeter or metering device shall be provided for any tenant within a new building or an addition that is projected to consume more than 1,000 gal/day (3800 L/day).	<input checked="" type="checkbox"/>		
A5.303.2.3.1 Tier 1 – 12-percent savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 12 percent shall be provided. By either the prescriptive or performance method.		<input checked="" type="checkbox"/>	
A5.303.2.3.2 Tier 2 – 20-percent savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 20 percent shall be provided. (Calculate savings by Water Use Worksheets)			<input checked="" type="checkbox"/>
A5.303.2.3.3 25-percent savings. A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by 25 percent shall be provided. (Calculate savings by Water Use Worksheets)			<input checked="" type="checkbox"/>
A5.303.2.3.4 Nonpotable water systems for indoor use. Utilizing nonpotable water systems (such as captured rainwater, treated graywater, and recycled water) intended to supply water closets, urinals, and other allowed uses, may be used in the calculations demonstrating the 12-, 20- or 25-percent reduction. The nonpotable water systems shall comply with the current edition of the <i>California Plumbing Code</i> .		<input type="checkbox"/>	
5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:	<input checked="" type="checkbox"/>		
5.303.3.1 Water closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-Type Toilets.	<input checked="" type="checkbox"/>		
Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.			
5.303.3.2 Urinals.			
5.303.3.2.1 Wall-mounted urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush.	<input checked="" type="checkbox"/>		
5.303.3.2.2 Floor-mounted urinals. The effective flush volume of floor-mounted urinals shall not exceed 0.5 gallons per flush.	<input checked="" type="checkbox"/>		
5.303.3.3 Showerheads.	<input checked="" type="checkbox"/>		
5.303.3.3.1 Single showerhead. Showerheads shall have a maximum flow rate of not more than 2.0 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.			
5.303.3.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gallons per minute at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.	<input checked="" type="checkbox"/>		
Note: A hand-held shower shall be considered a showerhead.			

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

		VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
APPLICATION CHECKLIST FOR BSC	MANDATORY		
A5.303.3 Appliances and fixture commercial application. Appliances and fixtures shall meet the following: 1. Clothes washers shall have a maximum Water Factor (WF) that will reduce the use of water by 10 percent below the California Energy Commissions' WF standards for commercial clothes washers located in Title 20 of the <i>California Code of Regulations</i> . 2. Dishwashers shall meet the criteria in Section A5.303.3(2)(a) and (b). 3. Ice makers shall be air cooled. 4. Food steamers shall be connectionless or boilerless , and shall consume no more than 2 gallons of water per pan per hour, including condensate water, for batch type steamers, and no more than 5 gallons of water per pan per hour, including condensate water, for cook to order steamers. 5. The use and installation of water softeners that discharge to the community sewer system may be limited or prohibited by local agencies if certain conditions are met. 6. Combination ovens shall use a maximum of 1.5 gallons of water per hour per pan, including condensate water. 7. Commercial pre-rinse spray valves manufactured on or after January 1, 2006 shall function at equal to or less than 1.6 gpm (0.10 L/s) at 60 psi (414 kPa) and a. Be capable of cleaning 60 plates in an average time of not more than 30 seconds per plate b. Be equipped with an integral automatic shutoff c. Operate at static pressure of at least 30 psi (207 kPa) when designed for a flow rate of 1.3 gpm (0.08 L/s) or less 8. Food waste pulping systems shall use no more than 2 gpm of potable water. 8.1. Note: potable water excludes on-site graywater use, such as dishwasher discharge water.		☐	☐
A5.303.4 Water conserving plumbing fixtures and fittings A5.303.4.1 Nonwater supplied urinals. Nonwater supplied urinals are installed in accordance with the <i>California Plumbing Code</i> . Where approved, Hybrid urinals, as defined in Chapter 2, shall be considered waterless urinals.		☐	☐
5.303.3.4 Faucets and fountains 5.303.3.4.1 Nonresidential lavatory faucets. Lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi. 5.303.3.4.2 Kitchen faucets. Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi. 5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches)] at 60 psi]. 5.303.3.4.4 Metering faucets. Metering faucets shall not deliver more than 0.20 gallons per cycle. 5.303.3.4.5 Metering faucets for wash fountains. Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle/20 [rim space (inches)] at 60 psi]. Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.			
5.303.4 Commercial kitchen equipment. 5.303.4.1 Food waste disposers. Disposers shall either modulate the use of water to no more than 1 gpm when the disposer is not in use (not actively grinding food waste/no-load) or shall automatically shut off after no more than 10 minutes of inactivity. Disposers shall use no more than 8 gpm of water. Note: This code section does not affect local jurisdiction authority to prohibit or require disposer installation.	☒		
5.303.5 Areas of additions or alteration. For those occupancies within the authority of the California Building Standards Commission as specified in Section 103, the provisions of Section 5.303.3 and 5.303.4 shall apply to new fixtures in additions or areas of alterations to the building.	☒		
A5.303.5 Dual plumbing. New buildings and facilities shall be dual plumbed for potable and recycled water systems for toilet flushing when recycled water is available as determined by the enforcement authority.		☐	☐
5.303.6 Standards for plumbing fixtures and fittings. Plumbing fixtures and fittings shall be installed in accordance with the <i>California Plumbing Code</i> , and shall meet the applicable standards referenced in Table 1701.1 of the <i>California Plumbing Code</i> and in Chapter 6 of this code.	As applicable ☒		
Outdoor Water Use			
5.304.1 Scope. The provisions of Section 5.304 Outdoor Water Use reference the mandatory Model Water Efficiency Landscape Ordinance (MWEO) contained within Chapter 2.7, Division 2, Title 23, <i>California Code of Regulations</i> . ³	☒		
A5.304.2 Outdoor water use. For new water service not subject to the provisions of <i>Water Code</i> Section 535, separate meters or submeters shall be installed for indoor and outdoor water use for landscaped areas of at least 500 square feet but not more than 1,000 square feet.		☐	☐
5.304.2 Outdoor water use in landscape areas equal to or greater than 500 square feet. ³ When water is used for outdoor irrigation for new construction projects with an aggregate landscape area equal to or greater than 500 square feet requiring a building or landscape permit, plan check or design review, one of the following shall apply: 1. A local water efficient landscape ordinance that is, based on evidence in the record, at least as effective in conserving water as the updated model ordinance adopted by the Department of Water Resources (DWR) per Government Code Section 65595 (c). 2. The California Department of Water Resources Model Water Efficient Landscape Ordinance (MWEO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, <i>California Code of Regulations</i> .	☒		

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
5.304.3 Outdoor water use in rehabilitated landscape projects equal to or greater than 2,500 square feet. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit, plan check, or design review shall comply with Section 5.304.2, Item 1 or 2. ³	<input checked="" type="checkbox"/>		
5.304.4 Outdoor water use in landscape areas of 2,500 square feet or less. Any project with an aggregate landscape area of 2,500 square feet or less may comply with the performance requirements of MWELO or conform to the prescriptive compliance measures contained in MWELO's Appendix D. ³	<input checked="" type="checkbox"/>		
5.304.5 Graywater or rainwater use in landscape areas. For projects using treated or untreated graywater or rainwater captured on site, any lot or parcel within the project that has less than 2,500 square feet of landscape and meets the lot or parcel's landscape water requirement (Estimated Total Water Use) entirely with treated or untreated graywater or through stored rainwater captured on site is subject only to Appendix D Section (5). ³	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A5.304.6 Restoration of areas disturbed by construction. Restore all areas disturbed during construction by planting with local native and/or noninvasive vegetation.		<input type="checkbox"/>	<input type="checkbox"/>
A5.304.7 Previously developed sites. On previously developed or graded sites, restore or protect at least 50 percent of the site area with native and/or noninvasive vegetation.		<input type="checkbox"/>	<input type="checkbox"/>
A5.304.8 Graywater irrigation system. Install graywater collection system for onsite subsurface irrigation using graywater collected from bathtubs, showers, bathroom wash basins and laundry water. See <i>California Plumbing Code</i> .		<input type="checkbox"/>	<input type="checkbox"/>
Water Reuse			
A5.305.1 Nonpotable water systems. Nonpotable water systems for indoor and outdoor use shall comply with the current edition of the <i>California Plumbing Code</i> .		<input type="checkbox"/>	<input type="checkbox"/>
A5.305.2 Irrigation systems. Irrigation systems regulated by a local water efficient landscape ordinance or by the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) shall use recycled water.		<input type="checkbox"/>	<input type="checkbox"/>
Material Conservation and Resource Efficiency			
Efficient Framing Systems			
A5.404.1 Wood framing. Employ advanced wood framing techniques or OVE, as permitted by the enforcing agency. See sections A5.404.1.1 and A5.404.1.2 for additional requirements.		<input type="checkbox"/>	<input type="checkbox"/>
Material Sources			
A5.405.1 Regional materials. Select building materials or products for permanent installation on the project that have been harvested or manufactured in California or within 500 miles of the project site, meeting the criteria listed in Section A5.405.1.		<input type="checkbox"/>	<input type="checkbox"/>
A5.405.2 Bio-based materials. Select bio-based building materials per Section A5.405.2.1 or A5.405.2.2.			
A5.405.2.1 Certified wood products. Certified wood is an important component of green building strategies and the California Building Standards Commission will continue to develop a standard through the next code cycle.		<input type="checkbox"/>	<input type="checkbox"/>
A5.405.2.2 Rapidly renewable materials. Use materials made from plants harvested within a ten-year cycle for at least 2.5 percent of total materials value, based on estimated cost.		<input type="checkbox"/>	<input type="checkbox"/>
A5.405.3 Reused materials. Use salvaged, refurbished, refinished or reused materials for at least 5 percent of the total value, based on estimated cost of materials on the project.		<input type="checkbox"/>	<input type="checkbox"/>
A5.405.4 Recycled content. Use materials, equivalent in performance to virgin materials, with a total (combined) recycled content value (RCV) of: Tier 1. The RCV shall not be less than 10 percent of the total material cost of the project or use two products which meet the minimum recycled content levels in Table A5.405.4 for at least 75%, by cost, of all products in that category in the project Tier 2. The RCV shall not be less than 15 percent of the total material cost of the project or use three products which meet the minimum recycled content levels in Table A5.405.4 for at least 75%, by cost, of all products in that category in the project. Note: Use the equations in the subsections for calculating total materials cost, recycled content, RCV of materials and assemblies, and total RCV.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>

continued

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
A5.405.5 Cement and concrete. Use cement and concrete made with recycled products and complying with the following sections: A5.405.5.1 Cement. Cement shall comply with one of the following standards: 1. Portland cement shall meet ASTM C150. 2. Blended hydraulic cement shall meet ASTM C595. 3. Other Hydraulic Cements shall meet ASTM C1157. A5.405.5.2 Concrete. Unless otherwise directed by the Engineer of Record, use concrete manufactured with cementitious materials in accordance with Sections A5.405.5.2.1 and A5.405.5.2.1.1, as approved by the enforcing agency. A5.405.5.2.1 Supplementary cementitious materials (SCMs). Use concrete made with one or more of the SCMs listed in Section A5.405.5.2.1. A5.405.5.2.1.1 Mix design equation. Use any combination of one or more SCMs, satisfying Equation A4.5-14. Exception: Minimums in mix designs approved by the Engineer of Record may be lower where high early strength is needed. A5.405.5.3 Additional means of compliance. Any of the following measures shall be permitted to be employed for the production of cement or concrete, depending on their availability and suitability, in conjunction with Section A5.405.5.2. A5.405.5.3.1 Cement. The following measures may be used in the manufacture of cement. A5.405.5.3.1.1 Alternative fuels. Where permitted by state or local air quality standards, A5.405.5.3.1.2 Alternative power. Alternate electric power generated at the cement plant and/or green power purchased from the utility meeting the requirements of Section A5.211.		<input type="checkbox"/>	<input type="checkbox"/>
A5.405.5.3.2 Concrete. The following measures may be used in the manufacture of concrete, A5.405.5.3.2.1 Alternative energy. Renewable or alternative energy meeting the requirements of Section A5.211. A5.405.5.3.2.2 Recycled aggregates. Concrete made with one or more of the materials listed in Section A5.405.5.3.2.2. A5.405.5.3.2.3 Mixing water. Water recycled by the local water purveyor or water reclaimed from manufacturing processes and conforming to ASTM C1602. A5.405.5.3.2.4 High strength concrete. Concrete elements designed to reduce their total size compared to standard 3,000 psi concrete, as approved by the Engineer of Record.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Enhanced Durability and Reduced Maintenance			
A5.406.1.1 Service life. Select materials for longevity and minimal deterioration under conditions of use. A5.406.1.2 Reduced maintenance. Select materials that require little, if any, finishing. A5.406.1.3 Recyclability. Select materials that can be re-used or recycled at the end of their service life.		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Weather Resistance and Moisture Management			
5.407.1 Weather protection. Provide a weather-resistant exterior wall and foundation envelope as required by <i>California Building Code</i> , Section 1403.2 and <i>California Energy Code</i> , Section 150, manufacturer's installation instructions or local ordinance, whichever is more stringent. ³	<input checked="" type="checkbox"/>		
5.407.2 Moisture control. Employ moisture control measures by the following methods; 5.407.2.1 Sprinklers. Design and maintain landscape irrigation systems to prevent irrigation spray on structures. 5.407.2.2 Entries and openings. Design exterior entries and openings to prevent water intrusion into buildings as follows. 5.407.2.2.1 Exterior door protection. Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following: 1. An installed awning at least 4 feet in depth. 2. The door is protected by a roof overhang at least 4 feet in depth. 3. The door is recessed at least 4 feet. 4. Other methods which provide equivalent protection. 5.407.2.2.2 Flashing. Install flashings integrated with a drainage plane.	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>		

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continued

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Building Maintenance and Operation			
5.410.1 Recycling by occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials including organic waste for recycling. ³ Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code 42649.82 (a)(2)(A) et seq. shall also be exempt from the organic waste portion of this section.	<input checked="" type="checkbox"/>		
5.410.1.1 Additions. All additions conducted within a 12-month period under single or multiple permits, resulting in an increase of 30 percent or more in floor area, shall provide recycling areas on site. Exception: Additions within a tenant space resulting in less than a 30-percent increase in the tenant space floor area.	<input checked="" type="checkbox"/>		
5.410.2 Commissioning. [N] For new buildings 10,000 square feet and over, building commissioning for all building systems covered by Title 24, Part 6, process systems and renewable energy systems shall be included in the design and construction processes of the building project. All occupancies other than I-occupancies and L-occupancies shall comply with the <i>California Energy Code</i> as prescribed in <i>California Energy Code</i> Section 120.8. For I-occupancies which are not regulated by OSHPD or for I-occupancies and L-occupancies which are not regulated by the <i>California Energy Code</i> Section 100.0 Scope; all requirements in sections 5.410.2 through 5.410.2.6 shall apply. Commissioning requirements shall include items listed in Section 5.410.2. Exceptions: 1. Unconditioned warehouses of any size 2. Areas less than 10,000 square feet used for offices or other conditioned accessory spaces within unconditioned warehouses 3. Tenant improvements less than 10,000 square feet as described in Section 303.1.1. 4. Open parking garages of any size, or open parking garage areas of any size, within a structure.	<input checked="" type="checkbox"/>		
5.410.2.1 Owner's Project Requirements (OPR). [N] Documented before the design phase of the project begins the OPR shall include items listed in Section 5.410.2.1.	<input checked="" type="checkbox"/>		
5.410.2.2 Basis of Design (BOD). [N] A written explanation of how the design of the building systems meets the OPR shall be completed at the design phase of the building project to cover the systems listed in Section 5.410.2.2.	<input checked="" type="checkbox"/>		
5.410.2.3 Commissioning plan. [N] A commissioning plan describing how the project will be commissioned shall include items listed in Section 5.410.2.3.	<input checked="" type="checkbox"/>		
5.410.2.4 [N] Functional performance testing shall demonstrate the correct installation and operation of each component, system and system-to-system interface in accordance with the approved plans and specifications.	<input checked="" type="checkbox"/>		
5.410.2.5 Documentation and training. [N] A Systems manual and systems operations training are required.			
5.410.2.5.1 Systems manual. [N] The systems manual shall be delivered to the building owner or representative and facilities operator and shall include the items listed in Section 5.410.2.5.1.	<input checked="" type="checkbox"/>		
5.410.2.5.2 Systems operations training. [N] A program for training of the appropriate maintenance staff for each equipment type and/or system shall be developed and shall include items listed in Section 5.410.2.5.2.	<input checked="" type="checkbox"/>		
5.410.2.6 Commissioning report. [N] A report of commissioning process activities undertaken through the design and construction phases of the building project shall be completed and provided to the owner or representative.	<input checked="" type="checkbox"/>		
5.410.4 Testing and adjusting. Testing and adjusting of systems shall be required for buildings less than 10,000 square feet. Applies to new systems serving additions or alterations.	<input checked="" type="checkbox"/>		
5.410.4.2 Systems. Develop a written plan of procedures for testing and adjusting systems. Systems to be included for testing and adjusting shall include, as applicable to the project, the systems listed in Section 5.410.4.2.	<input checked="" type="checkbox"/>		
5.410.4.3 Procedures. Perform testing and adjusting procedures in accordance with applicable standards on each system as determined by the enforcing agency.	<input checked="" type="checkbox"/>		
5.410.4.3.1 HVAC balancing. Before a new space-conditioning system serving a building or space is operated for normal use, balance in accordance with the procedures defined by national standards listed in Section 5.410.4.3.1 or as approved by the enforcing agency.	<input checked="" type="checkbox"/>		
5.410.4.4 Reporting. After completion of testing, adjusting and balancing, provide a final report of testing signed by the individual responsible for performing these services.	<input checked="" type="checkbox"/>		
5.410.4.5 Operation and maintenance manual. Provide the building owner with detailed operating and maintenance instructions and copies of guaranties/warranties for each system prior to final inspection.	<input checked="" type="checkbox"/>		
5.410.4.5.1 Inspections and reports. Include a copy of all inspection verifications and reports required by the enforcing agency.	<input checked="" type="checkbox"/>		
Environmental Quality			
Fireplaces			
5.503.1 Fireplaces. Install only a direct-vent sealed-combustion gas or sealed wood-burning fireplace or a sealed woodstove and refer to residential requirements in the <i>California Energy Code</i> , Title 24, Part 6, Subchapter 7, Section 150.	<input checked="" type="checkbox"/> As applicable		
5.503.1.1 Woodstoves. Woodstoves shall comply with US EPA New Source Performance Standards (NSPS) emission limits, where applicable, and shall have a permanent label indicating they are certified to meet the emission limits.	<input checked="" type="checkbox"/>		

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Pollutant Control			
A5.504.1 Indoor air quality (IAQ) during construction. Maintain IAQ as provided in Sections A5.504.1.1 and A5.504.1.2.			
A5.504.1.1 Temporary ventilation. Provide temporary ventilation during construction in accordance with Section 121 of the <i>California Energy Code</i> , CCR, Title 24, Part 6 and Chapter 4 of CCR, Title 8 and as listed in Items 1 and 2 in Section A5.504.1.1.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.1.2 Additional IAQ measures. Employ additional measures as listed in Items 1 through 5 in Section A5.504.1.2.		<input type="checkbox"/>	<input type="checkbox"/>
5.504.1 Temporary ventilation. If the HVAC system is used during construction, use return air filters with a MERV of 8, based on ASHRAE 52.2-1999, or an average efficiency of 30% based on ASHRAE 52.1-1992. Replace all filters immediately prior to occupancy. Applies to additions or alterations.	<input checked="" type="checkbox"/>		
A5.504.2 IAQ postconstruction. Flush out the building per Section A5.504.2 prior to occupancy or if the building is occupied.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.2.1 IAQ Testing. A testing alternative may be employed after all interior finishes have been installed, using testing protocols recognized by the United State Environmental Protection Agency (U.S. EPA) and in accordance with Section A5.504.2.1.2. Retest as required in Section A5.504.2.1.3.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.2.1.1 Maximum levels of contaminants. Allowable levels of contaminant concentrations measured by testing shall not exceed the following:		As applicable	As applicable
1. Carbon Monoxide (CO): 9 parts per million, not to exceed outdoor levels by 2 parts per million;		<input type="checkbox"/>	<input type="checkbox"/>
2. Formaldehyde: 27 parts per billion;		<input type="checkbox"/>	<input type="checkbox"/>
3. Particulates (PM10): 50 micrograms per cubic meter;		<input type="checkbox"/>	<input type="checkbox"/>
4. 4-Phenylcyclohexene (4-PCH): 6.5 micrograms per cubic meter; and		<input type="checkbox"/>	<input type="checkbox"/>
5. Total Volatile Organic Compounds (TVOC): 300 micrograms per cubic meter.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.2.1.2 Test protocols. Testing of indoor air quality should include the elements listed in Items 1 through 4.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.2.1.3 Noncomplying building areas. For each sampling area of the building exceeding the maximum concentrations specified in Section A5.504.2.1.1, flush out with outside air and retest samples taken from the same area. Repeat the procedures until testing demonstrates compliance.		<input type="checkbox"/>	<input type="checkbox"/>
5.504.3 Covering of duct openings and protection of mechanical equipment during construction. At the time of rough installation and during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.	<input checked="" type="checkbox"/>		
5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.			
5.504.4.1 Adhesives, sealants, caulks. Adhesives and sealants used on the project shall meet the requirements of the following standards.			
1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2.	<input checked="" type="checkbox"/>		
2. Aerosol adhesives and smaller unit sizes of adhesives and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of <i>California Code of Regulations</i> , Title 17, commencing with Section 94507.	<input checked="" type="checkbox"/>		
5.504.4.3 Paints and coatings. Architectural paints and coatings shall comply with Table 5.504.4.3 unless more stringent local limits apply.	<input checked="" type="checkbox"/>		
5.504.4.3.1 Aerosol paints and coatings. Aerosol paints and coatings shall meet the Product- Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances (CCR, Title 17, Section 94520, et seq.).	<input checked="" type="checkbox"/>		
5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency.	<input checked="" type="checkbox"/>		
5.504.4.4 Carpet systems. All carpet installed in the building interior shall meet the testing and product requirements of one of the standards listed in Section 5.504.4.4.	<input checked="" type="checkbox"/>		
5.504.4.4.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program.	<input checked="" type="checkbox"/>		
5.504.4.4.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 5.504.4.1.	<input checked="" type="checkbox"/>		
5.504.4.5 Composite wood products. Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in Table 5.504.4.5.	<input checked="" type="checkbox"/>		
A5.504.4.5.1 No added formaldehyde, Tier 1. Use composite wood products approved by the ARB as no-added formaldehyde (NAF) based resins or ultra-low emitting formaldehyde (ULEF) resins.			<input checked="" type="checkbox"/>
5.504.4.5.3 Documentation. Verification of compliance with this section shall be provided as requested by the enforcing agency. Documentation shall include at least one of the following:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Product certifications and specifications.	<input checked="" type="checkbox"/>		
2. Chain of custody certifications.	<input checked="" type="checkbox"/>		
3. Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).	<input checked="" type="checkbox"/>		
4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engineered Wood Association, the Australian AS/NZS 2269 or European 636 3S standards.	<input checked="" type="checkbox"/>		
5. Other methods acceptable to the enforcing agency.	<input checked="" type="checkbox"/>		

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
5.504.4.6 Resilient flooring systems. For 80 percent of floor area receiving resilient flooring, install resilient flooring which meets one of the following: 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly EQ. 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program). A5.504.4.6.1 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.	<input checked="" type="checkbox"/>		
A5.504.4.7 Resilient flooring systems, Tier 1. For 90 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following: 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly EQ. 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
A5.504.4.7.1 Resilient flooring systems, Tier 2. For 100 percent of floor area to scheduled to receive resilient flooring, install resilient flooring shall meet at least one of the following: 1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program; 2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010; 3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria Interpretation for EQ 7.0 and 7.1 (formerly EQ. 2.2) dated July 2012 and listed in the CHPS High Performance Product Database; or 4. Products certified under UL GREENGUARD Gold (formerly the Greenguard Children's & Schools Program). A5.504.4.7.2 Verification of compliance. Documentation shall be provided verifying that resilient flooring materials meet the pollutant emission limits.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.504.4.8 Thermal insulation, Tier 1. Comply with the standards listed in Items 1 through 3. A5.504.4.8.1 Thermal insulation, Tier 2 Thermal insulation, No-added Formaldehyde. Install thermal insulation which complies with Tier 1 plus does not contain any added formaldehyde. A5.504.4.8.2 Verification of compliance. Documentation shall be provided verifying that thermal insulation materials meet the pollutant emission limits.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A5.504.4.9 Acoustical ceilings and wall panels. Comply with Chapter 8 in Title 24, Part 2 and with the VOC-emission limits defined in the 2009 CHPS criteria and listed on its High Performance Products Database. A5.504.4.9.1 Verification of compliance. Documentation shall be provided verifying that acoustical finish materials meet the pollutant emission limits. Note: Products compliant with CHPS criteria certified under the Greenguard Children & Schools program may also be used.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.5 Hazardous particulates and chemical pollutants. Minimize and control pollutant entry into buildings and cross-contamination of regularly occupied areas. A5.504.5.1 Entryway systems. Install permanent entryway systems measuring at least six feet in the primary direction of travel to capture dirt and particulates at entryways directly connected to the outdoors as listed in Items 1 through 3 in Section A5.504.5.1.		<input type="checkbox"/>	<input type="checkbox"/>
A5.504.5.2 Isolation of pollutant sources. In rooms where activities produce hazardous fumes or chemicals, exhaust them and isolate them from their adjacent rooms as listed in Items 1 through 3 in Section A5.504.5.2.		<input type="checkbox"/>	<input type="checkbox"/>
5.504.5.3 Filters. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air that provides at least a MERV of 8. MERV 8 filters shall be installed prior to occupancy, and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual. Exceptions: 1. An ASHRAE 10-percent to 15-percent efficiency filter shall be permitted for an HVAC unit meeting the 2013 California Energy Code having 60,000 Btu/h or less capacity per fan coil, if the energy use of the air delivery system is 0.4 W/cfm or less at design air flow. 2. Existing mechanical equipment.	<input checked="" type="checkbox"/>		
5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.		<input type="checkbox"/>	<input type="checkbox"/>

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SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
A5.504.5.3.1 Filters, Tier 1. In mechanically ventilated buildings, provide regularly occupied areas of the building with air infiltration media for outside and return air prior to occupancy that provides at least a MERV of 11. A5.504.5.3.1.1 Filters, Tier 2. In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 13.			
5.504.7 Environmental tobacco smoke (ETS) control. Prohibit smoking within 25 feet of building entries, outdoor air intakes and operable windows where outdoor areas are provided for smoking and within the building as already prohibited by other laws or regulations; or as enforced by ordinances, regulations or policies of any city, county, city and county, California Community College, campus of the California State University or campus of the University of California, whichever are more stringent.	<input checked="" type="checkbox"/>		
Indoor Moisture and Radon Control			
5.505.1 Indoor moisture control. Buildings shall meet or exceed the provisions of <i>California Building Code</i> , CCR, Title 24, Part 2, Sections 1203 and Chapter 14.1. ²	<input checked="" type="checkbox"/>		
Air Quality and Exhaust			
5.506.1 Outside air delivery. For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 of the <i>California Energy Code</i> and Chapter 4 of CCR, Title 8 or the applicable local code, whichever is more stringent. ³	<input checked="" type="checkbox"/>		
5.506.2 Carbon dioxide (CO₂) monitoring. For buildings or additions equipped with demand control ventilation, CO ₂ sensors and ventilation controls shall be specified and installed in accordance with the requirements of the <i>California Energy Code</i> , CCR, Section 120(c)(4). ³	<input checked="" type="checkbox"/>		
Environmental Comfort			
A5.507.1 Lighting and thermal comfort controls. Provide controls in the workplace as described in Sections A5.507.1.1 and A5.507.1.2. A5.507.1.1 Single-occupant spaces. Provide individual controls that meet energy use requirements in the <i>California Energy Code</i> by Sections A5.507.1.1.1 and A5.507.1.1.2. A5.507.1.1.1 Lighting. Provide individual task lighting and/or daylighting controls for at least 90 percent of the building occupants. A5.507.1.1.2 Thermal comfort. Provide individual thermal comfort controls for at least 50 percent of the building occupants by Items 1 and 2 in Section A5.507.1.1.2. A5.507.1.2 Multi-occupant spaces. Provide lighting and thermal comfort system controls for all shared multi-occupant spaces.		<input type="checkbox"/>	<input type="checkbox"/>
A5.507.2 Daylight. Provide daylit spaces as required for toplighting and sidelighting in the <i>California Energy Code</i> . In constructing a design, consider Items 1 through 4 in Section A5.507.3.		<input type="checkbox"/>	<input type="checkbox"/>
A5.507.3 Views. Achieve direct line of sight to the outdoor environment via vision glazing between 2'6" and 7'6" above finish floor for building occupants in 90 percent of all regularly occupied areas. A5.507.3.1 Interior office spaces. Entire areas of interior office spaces may be included in the calculation if at least 75 percent of each area has direct line of sight to perimeter vision glazing. A5.507.3.2 Multi-occupant spaces. Include in the calculation the square footage with direct line of sight to perimeter vision glazing.		<input type="checkbox"/>	<input type="checkbox"/>
5.507.4 Acoustical control. Employ building assemblies and components with STC values determined in accordance with ASTM E90 and ASTM E413 or OITC determined in accordance with ASTM E1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.	<input checked="" type="checkbox"/>		
5.507.4.1 Exterior noise transmission, prescriptive method. Wall and floor-ceiling assemblies exposed to the noise source making up the building envelope shall have exterior wall and roof ceiling assemblies meeting a composite STC rating of at least 50 or a composite OITC rating of no less than 40 with exterior windows of a minimum STC of 40 or OITC of 30 in the locations described in Items 1 and 2. Also applies to addition envelope or altered envelope. 5.507.4.1.1 Noise exposure where noise contours are not readily available. Buildings exposed to a noise level of 65 dB L _{eq} -1Hr during any hour of operation shall have exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30). Also applies to addition or alteration exterior wall.	<input checked="" type="checkbox"/>		
5.507.4.2 Performance method. For buildings located as defined in Sections A5.507.4.1 or A5.507.4.1.1, wall and roof-ceiling assemblies making up the building envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L _{eq} -1Hr) of 50 dBA in occupied areas during any hour of operation. Also applies to addition envelope or altered envelope. 5.507.4.2.1 Site features. Exterior features such as sound walls or earth berms may be utilized as appropriate to the project to mitigate sound migration to the interior. Also applies to addition envelope or altered envelope. 5.507.4.2.1 Documentation of compliance. An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.	<input checked="" type="checkbox"/>		
5.507.4.3 Interior sound transmission. Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.	<input checked="" type="checkbox"/>		

continued

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
Outdoor Air Quality			
5.508.1 Ozone depletion and global warming reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2. 5.508.1.1 CFCs. Install HVAC and refrigeration equipment that does not contain CFCs. ³ 5.508.1.2 Halons. Install fire suppression equipment that does not contain Halons. ⁴ A5.508.1.3 Hydrochlorofluorocarbons (HCFCs). Install HVAC and refrigeration equipment that does not contain HCFCs. A5.508.1.4 Hydrofluorocarbons (HFCs). Install HVAC complying with either of the following: 1. Install HVAC, refrigeration and fire suppression equipment that do not contain HFCs or that do not contain HFCs with a global warming potential greater than 150. 2. Install HVAC and refrigeration equipment that limit the use of HFC refrigerant through the use of a secondary heat transfer fluid with a global warming potential no greater than 1.	As applicable <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.508.2 Supermarket refrigerant leak reduction. New commercial refrigeration systems shall comply with the provisions of this section when installed in retail food stores 8,000 square feet or more conditioned area, and that utilize either refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units. The leak reduction measures apply to refrigeration systems containing high-global-warming potential (high-GWP) refrigerants with a GWP of 150 or greater. New refrigeration systems include both new facilities and the replacement of existing refrigeration systems in existing facilities. Exception: Refrigeration systems containing low-global warming potential (low-GWP) refrigerant with a GWP value less than 150 are not subject to this section. Low-GWP refrigerants are nonozone-depleting refrigerants that include ammonia, carbon dioxide (CO ₂), and potentially other refrigerants.	<input checked="" type="checkbox"/> As applicable		
5.508.2.1 Refrigerant piping. Piping compliant with the <i>California Mechanical Code</i> shall be installed to be accessible for leak protection and repairs. Piping runs using threaded pipe, copper tubing with an outside diameter (OD) less than 1/4 inch, flared tubing connections and short radius elbows shall not be used in refrigerant systems except as noted below. 5.508.2.1.1 Threaded pipe. Threaded connections are permitted at the compressor rack. 5.508.2.1.2 Copper pipe. Copper tubing with an OD less than 1/4 inch may be used in systems with a refrigerant charge of 5 pounds or less. 5.508.2.1.2.1 Anchorage. 1/4 inch OD tubing shall be securely clamped to a rigid base to keep vibration levels below 8 mils. 5.508.2.1.3 Flared tubing connections. Double-flared tubing connections may be used for pressure controls, valve pilot lines and oil. Exception: Single-flared tubing connections may be used with a multiring seal coated with industrial sealant suitable for use with refrigerants and tightened in accordance with manufacturer's recommendations. 5.508.2.1.4 Elbows. Short radius elbows are only permitted where space limitations prohibit use of long radius elbows. 5.508.2.2 Valves. Valves and fittings shall comply with the <i>California Mechanical Code</i> and as follows. 5.508.2.2.1 Pressure relief valves. For vessels containing high-GWP refrigerant, a rupture disc shall be installed between the outlet of the vessel and the inlet of the pressure relief valve. 5.508.2.2.1.1 Pressure detection. A pressure gauge, pressure transducer or other device shall be installed in the space between the rupture disc and the relief valve inlet to indicate a disc rupture or discharge of the relief valve. 5.508.2.2.2 Access valves. Only Schrader access valves with a brass or steel body are permitted for use. 5.508.2.2.2.1 Valve caps. For systems with a refrigerant charge of 5 pounds or more, valve caps shall be brass or steel and not plastic. 5.508.2.2.2.2 Seal caps. If designed for it, the cap shall have a neoprene O-ring in place. 5.508.2.2.2.2.1 Chain tethers. Chain tethers to fit over the stem are required for valves designed to have seal caps. Exception: Valves with seal caps that are not removed from the valve during stem operation. 5.508.2.3 Refrigerated service cases. Refrigerated service cases holding food products containing vinegar and salt shall have evaporator coils of corrosion-resistant material, such as stainless steel; or be coated to prevent corrosion from these substances. 5.508.2.3.1. Coil coating. Consideration shall be given the heat transfer efficiency of coil coating to maximize energy efficiency.			

continued

SECTION A5.602
NONRESIDENTIAL OCCUPANCIES APPLICATION CHECKLIST—continued⁴

APPLICATION CHECKLIST FOR BSC	MANDATORY	VOLUNTARY ¹	
		CALGreen Tier 1	CALGreen Tier 2
5.508.2.4 Refrigerant receivers. Refrigerant receivers with capacities greater than 200 pounds shall be fitted with a device that indicates the level of refrigerant in the receiver. 5.508.2.5 Pressure testing. The system shall be pressure tested during installation prior to evacuation and charging. 5.508.2.5.1 Minimum pressure. The system shall be charged with regulated dry nitrogen and appropriate tracer gas to bring system pressure up to 300 psig minimum. 5.508.2.5.2 Leaks. Check the system for leaks, repair any leaks, and retest for pressure using the same gauge. 5.508.2.5.3 Allowable pressure change. The system shall stand, unaltered, for 24 hours with no more than a +/- one pound pressure change from 300 psig, measured with the same gauge. 5.508.2.6 Evacuation. The system shall be evacuated after pressure testing and prior to charging. 5.508.2.6.1 First vacuum. Pull a system vacuum down to at least 1000 microns (+/- 50 microns), and hold for 30 minutes. 5.508.2.6.2 Second vacuum. Pull a second system vacuum to a minimum of 500 microns and hold for 30 minutes. 5.508.2.6.3 Third vacuum. Pull a third vacuum down to a minimum of 300 microns, and hold for 24 hours with a maximum drift of 100 microns over a 24-hour period.			

1. Green building measures in this table may be mandatory if adopted by a city, county, or city and county as specified in Section 101.7.

2. Required prerequisite for this Tier.

3. These measures are currently required elsewhere in statute or in regulation.

4. This application checklist is non-regulatory, intended only as an aid to the user and may not contain complete code language. Refer to Chapter 5 and Appendix Chapter A5 for complete code provisions.